

SUBSTITUTE SPECIFICATION
AND ABSTRACT

DESCRIPTION

5

ALLOY COATING FOR DIFFUSION BARRIER, METHOD FOR FORMING
SAME, AND HIGH TEMPERATURE DEVICE MEMBER

Technical field

10 The present invention relates to a diffusion barrier alloy film for use as a surface film (coating film) for extending the service life of a high-temperature apparatus member, which is used at a high temperature, such as a gas turbine blade, a jet engine turbine blade, a
15 combustor, a nozzle, a boiler heat transfer pipe, a waste disposal apparatus, a semiconductor fabrication discharge gas treating apparatus, or the like, a method of manufacturing such an alloy film, and a high-temperature apparatus member incorporating such an alloy film.

20

Background Art

High-temperature apparatus members, such as industrial gas turbine blades, jet engines, or the like, for example, are subject to a fluid temperature in excess of
25 1300°C. Those members, which are made of a metal material, are susceptible to damage due primarily to high-temperature oxidation. For the purpose of making the members resistant to heat, it has heretofore been the general practice to